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=> fil wpids

FILE 'WPIDS' ENTERED AT 08:14:37 ON 15 MAR 1999
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FILE LAST UPDATED: 10 MAR 1999              <19990310/UP>
>>>UPDATE WEEKS:
MOST RECENT DERWENT WEEK            199910   <199910/DW>
DERWENT WEEK FOR CHEMICAL CODING:   199910
DERWENT WEEK FOR POLYMER INDEXING:  199910
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=> d his


     (FILE 'HOME' ENTERED AT 07:59:37 ON 15 MAR 1999)

     FILE 'WPIDS' ENTERED AT 07:59:43 ON 15 MAR 1999
L1           778 S PBN OR DMPO OR POBN OR TEMPO
L2             7 S PHENYL (2A) TERT? (3A) (BUTYLNITRONE OR BUTYL NITRONE)
L3             4 S TERT? (3A) BUTYL (3A) (PHENYLNITRONE OR PHENYL NITRONE)
L4            16 S PYRROLINE (2W) OXIDE# (3A) (DIMETHYL OR DI METHYL)
L5             2 S TETRAMETHYLPENTAMETHYLENE NITROXIDE OR
TETRAMETHYLPIPERIDIN?
L6            43 S TETRAMETHYLPIPERIDIN? (3A) OXY?
L7            16 S PIPERIDINYLOXY (3A) (TETRA METHYL OR TETRAMETHYL)
L8             0 S TETRA METHYL PENTAMETHYLENE NITRO? OR TETRAMETHYL
PENTAMETHYL
L9           556 S TETRA METHYLPIPERIDIN? OR TETRAMETHYL PIPERIDIN? OR TETRA
MET
L10         1364 S L1 OR L2 OR L3 OR L4 OR L5 OR L6 OR L7  OR L8 OR L9
L11          369 S OXIDATIVE (S) (DAMAG? OR STRESS?)
L12            7 S L11 AND L10
L13           42 S SPIN TRAP?
L14           14 S L10 AND L13
L15           10 S L14 NOT L12
L16            9 S L15 AND OXID?
L17        21999 S ANTIOXIDANT? OR ANTI OXID?
L18           89 S L17 AND L11
L19         9160 S OXID? (L)(DAMAG? OR STRESS?)
L20           14 S L19 AND L10
L21           23 S L12 OR L20 OR L16
L22          190 S NITRONE#
L23           10 S L22 AND L19
L24           12 S L22 AND L13
L25           16 S L23 OR L24
L26            8 S L25 NOT L21

     FILE 'WPIDS' ENTERED AT 08:14:37 ON 15 MAR 1999

=> d .wp l21 1-23; .wp l26 1-8
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L21 ANSWER 1 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-362355 [31] WPIDS
DNC C98-111395
TI Use of hydroxy-guanidine compounds for treating ischaemic conditions - including extracorporeal treatment of an organ intended for transplantation and treatment of pre-term children suffering from hypoxia.
DC B05 D22 E19
IN DAMBROVA, M; PRUSIS, P; UHLEN, S; WIKBERG, J
PA (WAPH-N) WA PHARM AB; (WAPH-N) WAPHARM AB
CYC 78
PI WO 9823267 A1 980604 (9831)* EN 75 pp
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG ZW
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW
AU 9851430 A 980622 (9844)
ADT WO 9823267 A1 WO 97-SE1969 971121; AU 9851430 A AU 98-51430 971121
FDT AU 9851430 A Based on WO 9823267
PRAI SE 96-4348 961126
AB WO 9823267 A UPAB: 980805
Use of a hydroxy-guanidine for the treatment of ischemic disease conditions is new. The condition may be caused by surgery or other therapy, is associated with the production of oxygen derived radicals and is a xanthine **oxidase**/xanthine dehydrogenase mediated condition (heart infarction, angina pectoris, cerebrovascular infarction, circulatory shock, transient ischaemic attack of the cerebrovascular system, arterial occlusion, arterial thromboembolism, bowel torsion with strangulation, testicular torsion, lung embolism, cardiac surgery including by-pass grafting, localised organ surgery involving reduced blood flow, organ transplantation, circulatory shock or general hypoxia).

USE - Hydroxy-guanidines may be used for extracorporeal treatment of an organ intended for transplantation, for the treatment of pre-term children suffering from hypoxia and for the treatment of arrhythmias (claimed).

The compounds may also be useful in treatment of altitude sickness, rheumatoid arthritis, glaucoma, inflammatory conditions, airway obstruction, asthma, duodenal ulceration, ulcerative colitis, Crohn's disease, arthritis, Crohn's disease, Parkinson's disease, paraquat intoxication, thermal skin injury, hyperthermia, pancreatitis, adult respiratory distress syndrome, nephrosis, adriamycin nephrosis, renal **damage** associated with administration of X-ray contrast media, malaria, distant organ injury, cutaneous porphyrin photosensitisation, inflammatory and auto-immune rheumatoid diseases, atherosclerosis, scleroderma, hepatitis, hepatic **damage** (caused by viral infection, interferon, etc.), increased intercranial pressure, spinal cord injury and bacterial meningitis.

The hydroxy-guanidine may be administered with a xanthine **oxidase** and/or xanthine dehydrogenase blocking drug (allopurinol, oxypurinol or amflutizole) or with a radical scavenger and/or adenosine deaminase inhibitor and/or superoxide dismutase and/or superoxide dismutase mimetic (erythro-9-(2-hydroxy-3-nonyl)adenine,

2'-deoxycoformycin), catalase, vitamin E, vitamin C, glutathione, uric acid, N-**tert-butyl**- alpha -**phenylnitrone**, dimethyl-sulphoxide, N-acetyl-cysteine, dimethylthiourea or beta -carotene (all claimed).

Dosage is 0.1-100 (preferably 0.2-50) mg/kg/day.

Dwg.0/8

L21 ANSWER 2 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-260553 [23] WPIDS
CR 95-098723 [13]; 96-454963 [45]; 98-249873 [21]; 98-505692 [43]; 98-520171 [44]; 98-556430 [47]; 98-582624 [49]
DNC C98-080866
TI Composition for alleviation of free radical toxicity, as red cell substitute and imaging agent - contains haemoglobin based oxygen carrier, unbound membrane permeable nitroxide and nitroxide labelled membrane impermeable macromolecule.
DC B04 K07
IN HSIA, J
PA (HSIA-I) HSIA J
CYC 1
PI US 5741893 A 980421 (9823)* 57 pp
ADT US 5741893 A CIP of US 93-107543 930816, CIP of US 94-291590 940815, CIP of US 95-417132 950331, US 95-487496 950607
PRAI US 95-487496 950607; US 93-107543 930816; US 94-291590 940815; US 95-417132 950331
AB US 5741893 A UPAB: 981210

A composition comprises : (a) a haemoglobin based oxygen carrier; (b) a membrane permeable first nitroxide; and (c) a nitroxide labelled membrane impermeable macromolecule selected from albumin, hydroxyethyl starch, dextran, liposome or immunoglobulin.

Preferably, the haemoglobin is stabilised by cross-linking, polymerisation, conjugation or encapsulation in a liposome, and is preferably 3,5-bisbromosilicyl-bisfumarate haemoglobin. The unbound membrane permeable nitroxide is preferably selected from 2,2,6,6-**tetramethylpiperidine**-N-**oxyl** (Tempol), 2,2,5,5-tetramethylpyrrolidine-N-oxyl (Proxyl)and 4,4-dimethyloxazolidine-N-oxyl (Doxyl) and the preferred nitroxide labelled macromolecule is polynitroxide albumin.

USE - (I) is used to alleviate **oxidative stress** and biological **damage** caused by free radicals, in conditions such as inflammation, radiation poisoning, head injury, shock, post ischaemic reperfusion injury, ionising radiation **damage**, alopecia, cataracts, sepsis, ulcers and aging. (I) may also be used as a red cell substitute (claimed) and as an imaging agent.

ADVANTAGE - Addition of membrane impermeable nitroxide labelled macromolecules to (I) gives better stability, less toxicity and a longer in vivo existence than prior art nitroxide formulations, in which the membrane permeable nitroxides are quickly reduced to inactive species. When used as a red cell substitute, it does not cause the side effects (systemic hypertension and vasoconstriction) of prior art formulations.

Dwg.0/29

L21 ANSWER 3 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-219066 [20] WPIDS
DNC C98-069376

TI Glycidyloxy-phenyl derivatives of 2,2,6,6-**tetra methyl -piperidine** - useful for stabilising polymers and polymer-based paint binders against **damage** by light, **oxidation** and-or heat.

DC A60 E13 G02

IN STEINMANN, A

PA (CIBA) CIBA SPECIALTY CHEM HOLDING INC

CYC 20

PI EP 837065 A1 980422 (9820)* DE 35 pp
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
JP 10120679 A 980512 (9829) 34 pp
CA 2218183 A 980416 (9835)

ADT EP 837065 A1 EP 97-810746 971007; JP 10120679 A JP 97-299391 971016; CA 2218183 A CA 97-2218183 971014

PRAI CH 96-2524 961016

AB EP 837065 A UPAB: 980520

Compounds of formula (I) are claimed;

R1 = H, 1-12C alkyl or alkoxy, 2-12C alkenyl or alkynyl, or CO-(1-12C alkyl) (in each case optionally with in-chain O, S, SO, SO2 or N-(1-12C alkyl) groups), 5-12C cycloalkyl or cycloalkoxy (optionally substituted with 1 to 4 1-4C alkyl and/or alkoxy groups), CO-(6-14C aryl) (optionally substituted with 1 to 9 1-4C alkyl and/or alkoxy groups), or benzyloxy or CO-benzyl (each optionally ring-substituted with 1- 4 1-4C alkyl and/or alkoxy groups);

R2-R5 = H, 1-12C alkyl or alkoxy, 5-12C cycloalkyl, phenyloxy, halogen or NO2.

Also claimed are: (i) homo-, co- and ter-polymers obtained by addition polymerisation of (I); (ii) compounds obtained by reacting (I) with mono-glycidyl compounds other than (I); (iii) compounds obtained by reacting (I) with amine(s), carboxylic acid(s), phenol(s), dicarboxylic acid anhydride(s) or alcohol(s); (iv) compounds (I) adsorbed on a filler; (v) compositions (II) containing (a) organic material which is sensitive to damage by light, oxygen and/or heat and (b) compound(s) (I) and/or polymers as in (i) as stabiliser; (vi) similar compositions in which component (b) comprises filler(s) as in (iv); and (vii) a process for stabilising organic material against damage as above by adding (I) and/or a polymer or filler as above.

Preferably R1 = H, 1-4C alkyl or alkoxy, 2-8C alkenyl, 2-4C alkynyl, CO-(1-4C alkyl) or 5-6C cycloalkoxy, preferably H, 1-12C alkyl, 2-12C alkenyl or alkynyl, or CO-(1-12C alkyl), each of which may contain in-chain O, S, SO, SO2 or N(1-12C alkyl) groups, most preferably H, CH3, CH2C triple bond CH or COCH3; R2-R5 = H, or 1-12C alkyl or alkoxy, preferably H or CH3. Preferred fillers for adsorption of (I) are titanium or silicon dioxide, calcium carbonate or sulphate, barium sulphate, aluminium hydroxide, talcum, carbon black, glass fibres or spheres, cellulose or wood flour. Component (a) is an organic, preferably synthetic, polymer, especially a polyolefin or a paint binder based on unmodified or modified acrylic, alkyd, polyurethane, polyester or polyamide resins. Compositions (II) contain 0.01-10 wt% (b) and may also contain other conventional additives.

USE - Compounds (I), polymers (i) and (I) adsorbed on fillers (iv) are used for stabilising organic material against damage by light, oxygen and/or heat (claimed). Used especially for stabilising polymeric materials.

ADVANTAGE - New stabilisers with high temperature resistance, enabling their use at high processing temperatures with a higher throughput.

Dwg.0/0

L21 ANSWER 4 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-219065 [20] WPIDS
DNC C98-069375
TI Adducts of amine(s) with epoxide derivatives of **tetra methyl-piperidine** - useful for stabilising polymers and polymer-based paint binders against **damage** by light, **oxidation** and/or heat.
DC A60 E13 G02
IN STEINMANN, A
PA (CIBA) CIBA SPECIALTY CHEM HOLDING INC
CYC 25
PI EP 837064 A2 980422 (9820)* DE 38 pp
R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI
JP 10130236 A 980519 (9830) 33 pp
CA 2218241 A 980416 (9835)
ADT EP 837064 A2 EP 97-810747 971007; JP 10130236 A JP 97-297900 971015; CA 2218241 A CA 97-2218241 971014
PRAI CH 96-2523 961016
AB EP 837064 A UPAB: 980520
Compounds (I), obtained by reaction of sec. or prim. amine(s) or ammonia with compounds of formula (1) or (2), in which A = O or NR2; B = direct bond or OCH2CH2 with the ethylene carbon attached to the piperidine nitrogen atom; R1 = H, 1-20C alkyl or alkoxy, 2-20C alkenyl or alkynyl, 6-20C aryl, 7-20C aralkyl, 5-8C cycloalkoxy, CO-(1-20C alkyl), CO-(6-20C aryl), CO-(7-20C aralkyl), OCO-(1-20C alkyl) or (1-6C alkyl)-Z-(1-6C alkyl); Z = O, S or CO; R2 = 1-12C alkyl or a group of formula (Pip); Y = O or NR4, or Y-NR3 is the divalent residue (Imi) left after removing the hydrogen in the 4-position of the piperidine ring; R3 = 1-20C alkyl, CO-(1-20C alkyl), CO-(6-20C aryl) or CO-(7-20C aralkyl); R4 = 1-20C alkyl, or H (if R3 is other than 1-20C alkyl).
Also claimed are (i) compositions (II) containing (a) organic material which is sensitive to damage by light, oxygen and/or heat and (b) compound(s) (I) as stabiliser, and (ii) a process for stabilising organic material against damage as above by adding (I).
USE - Compounds (I) are used for stabilising organic material against damage by light, oxygen and/or heat (claimed). Used especially for stabilising polymeric materials.
ADVANTAGE - New stabilisers with high temperature resistance, enabling their use at high processing temperatures with a higher throughput.
Dwg.0/0

L21 ANSWER 5 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-178518 [16] WPIDS
CR 87-037167 [05]; 88-235044 [33]; 89-229281 [32]; 94-316132 [39]; 96-019914 [02]; 96-029759 [03]; 98-129893 [12]; 98-129894 [12]; 98-144833 [13]; 98-206603 [18]
DNC C98-057283
TI Reducing amount of oxygen and hydroxyl free radicals in tissue - comprises

administering nitrone or nitroso **spin trap** to inhibit free radicals e.g. N-t-butyl-alpha-phenyl-nitrone, used to treat alopecia.

DC B03 B05 D21 E19
IN PROCTOR, P H
PA (PROC-I) PROCTOR P H
CYC 1
PI US 5723502 A 980303 (9816)* 5 pp
ADT US 5723502 A CIP of US 85-757131 850718, CIP of US 86-858050 860430, CIP of US 87-8186 870128, CIP of US 88-149720 880129, CIP of US 93-21970 930224, CIP of US 94-193228 940207, CIP of US 94-229374 940418, US 95-465411 950605
FDT US 5723502 A CIP of US 5352442, CIP of US 5470876, CIP of US 5472687
PRAI US 95-465411 950605; US 85-757131 850718; US 86-858050 860430; US 87-8186 870128; US 88-149720 880129; US 93-21970 930224; US 94-193228 940207; US 94-229374 940418
AB US 5723502 A UPAB: 980507

Reducing (A) the amount of oxygen and hydroxyl free radicals in tissue comprises administering a nitrone or nitroso **spin trap** to the tissue to inhibit the free radicals, the **spin trap** is N-t-butyl- alpha -phenylnitrone, 3,5-dibromo-4-nitrosobenzenesulphonic acid, 5,5-**dimethyl**-1-**pyrroline** N-**oxide**, 2-methyl-2-nitrosopropane, nitrosodisulphonic acid, alpha -(4-pyridyl-1-**oxide**)-N-t-butylnitrone, 3,3,5,5-tetramethylpyrroline N-**oxide** and 2,4,6-tri-t-butylnitrosobenzene. Also claimed are topical hair loss treatment compositions comprising a nitroso or nitrone **spin trap** and a topical carrier comprising: (i) a water and oil emulsion; or (ii) creams, lotions, shampoos and cream rinses.

USE - (A) is used to treat hair loss and stimulate hair growth (claimed).

Dwg.0/0

L21 ANSWER 6 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 98-008403 [01] WPIDS
DNC C98-002883
TI Treating AIDS dementia complex - by administering a free radical trapping agent based on nitrone.
DC B03 B05
IN FLOYD, R; GARLAND, W
PA (CENT-N) CENTAUR PHARM INC; (OKLA-N) OKLAHOMA MEDICAL RES FOUND
CYC 75
PI WO 9738683 A1 971023 (9801)* EN 32 pp
RW: AT BE CH DE DK EA ES FI FR GB GH GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
AU 9724606 A 971107 (9809)
ADT WO 9738683 A1 WO 97-US6253 970417; AU 9724606 A AU 97-24606 970417
FDT AU 9724606 A Based on WO 9738683
PRAI US 96-15709 960417
AB WO 9738683 A UPAB: 980107

A method of treating AIDS dementia complex (ADC) comprises administering a nitrone-based free radical trapping compound (I).

A composition containing (I) is also claimed.

Preferred compounds are e.g. alpha -phenyl butyl nitrone (**PBN**), alpha -(4-pyridyl-1-**oxide**)-N-tert.-butyl nitrone (**POBN**), their hydroxy, ester, alkyl, alkoxy and phenyl derivatives,

USE - (I) are active as therapeutic and prophylactic agents in the treatment of neuronal **damage** associated with HIV-1 virus infection, referred to in advanced stages as AIDS-associated dementia or ADC. ADC is a neurological syndrome characterised by cognitive deficits and motor and behavioural dysfunction. The HIV-1 envelope glycoprotein gp120 has been implicated in the development of ADC - the protein has been shown to be neurotoxic and to cause learning impairment and retardation of the development of complex motor behaviour in rat neonates. Nitric **oxide** has been implicated in gp120-induced neurotoxicity.

The active agent is administered orally, parenterally or by injection. Dosage is 0.01-10 mg/kg/hour for 1-120 hours, intravenously. Oral dosage is 0.02-50 (preferably 0.04-10) mg/kg administered 1-3 times a day.

Dwg.0/1

L21 ANSWER 7 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-393277 [36] WPIDS
DNC C97-126274
TI Treatment of amyotrophic lateral sclerosis - by administering copper-chelating agent e.g. di ethyl-thiocarbamate, has no significant effects on mutant or wild-type CuZnSOD enzymes, preserving potential beneficial actions, while treating harmful, disease-causing actions.
DC B04 B05 D16
IN BREDESEN, D E; GOTO, J J; GRALLA, E B; VALENTINE, J S; WIEDAU-PAZOS, M; WIEDAUPAZOS, M
PA (BURN-N) BURNHAM INST; (REGC) UNIV CALIFORNIA
CYC 75
PI WO 9726791 A1 970731 (9736)* EN 36 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
AU 9717107 A 970820 (9749)
US 5834457 A 981110 (9901)
EP 893951 A1 990203 (9910) EN
R: CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
ADT WO 9726791 A1 WO 97-US1228 970124; AU 9717107 A AU 97-17107 970124; US 5834457 A US 96-592704 960126; EP 893951 A1 EP 97-903119 970124, WO 97-US1228 970124
FDT AU 9717107 A Based on WO 9726791; EP 893951 A1 Based on WO 9726791
PRAI US 96-592704 960126
AB WO 9726791 A UPAB: 970909
Treatment of amyotrophic lateral sclerosis (ALS) comprises administration of a copper-chelating agent in an amount effective to ameliorate the symptoms of ALS. Also claimed are: (1) a method of treating a subject with a mutant sod1 gene by inhibiting the peroxidase activity of the gene; (2) a method of treating a subject with a mutant CuZnSOD protein by administration of a radical-scavenging agent; (3) a method of modulating radical formation in a subject with a mutant CuZnSOD protein by

administration of a copper-chelating agent, and (4) a method of treating a subject with DNA encoding a mutant sod1 gene by administration of an inhibitor of the DNA encoding the gene.

The sod1 gene is selected from A4V (most preferable), G93A, G37R, G41D, G85R, I112T, I113T, D90A, E100, L106, V148, H43, H46R, L38V and L144. The scavenging agent is a thiol reagent, lipid-soluble antioxidant, water-soluble antioxidant or a **spin-trapping** agent such as 5,5'-**dimethyl**-1-**pyrroline** N-**oxide**, tocopherol, ascorbate, N-acetylcysteine and N-t-alpha-phenylnitrone.

USE - The methods are used to treat amyotrophic lateral sclerosis in humans caused by mutant CuZnSOD enzymes. The copper-chelating agents DDC and penicillamine are administered in an amount of 0.001-1 g/kg; preferably in an amount that yields a DDC, or penicillamine, concentration in neural cells of 0.01-1 mu m.

ADVANTAGE - Amyotrophic lateral sclerosis caused by mutant CuZnSOD enzymes may be treated without significant effects on mutant or wild-type CuZnSOD enzymes, preserving the potential beneficial actions of the enzyme, while treating its harmful, disease-causing actions.

Dwg.0/7

L21 ANSWER 8 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-288920 [26] WPIDS
DNC C97-092887
TI Preparation of 2,2,6,6-**tetra methyl-piperidine** N-**oxide** compounds - by either hydrogen peroxide **oxidation** without catalyst or with carbonate catalyst, avoids heavy metal catalyst pollution in waste water..
DC A60 B03 E13
IN BESSONEN, K M; PASTOR, S D; SMITH, A R
PA (CIBA) CIBA GEIGY AG; (CIBA) CIBA GEIGY CORP; (CIBA) CIBA SPECIALTY CHEM CORP; (CIBA) CIBA SPECIALTY CHEM HOLDING INC
CYC 66
PI WO 9717327 A1 970515 (9726)* EN 19 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AU BA BB BG BR CA CN CU CZ EE GE HU IL IS JP KP KR LC LK LR LT LV MG MK MN MX NO NZ PL RO SG SI SK TR TT UA UZ VN
US 5629426 A 970513 (9726) 4 pp
AU 9674948 A 970529 (9737)
US 5654434 A 970805 (9737) 3 pp
US 5777126 A 980707 (9834)
TW 340843 A 980921 (9903)
ADT WO 9717327 A1 WO 96-EP4692 961029; US 5629426 A US 95-555823 951109; AU 9674948 A AU 96-74948 961029; US 5654434 A US 95-555822 951109; US 5777126 A Provisional US 96-17067 960501, US 97-847520 970421; TW 340843 A TW 96-112804 961019
FDT AU 9674948 A Based on WO 9717327
PRAI US 96-17067 960501; US 95-555822 951109; US 95-555823 951109; US 97-847520 970421
AB WO 9717327 A UPAB: 970626
Preparation of 4-hydroxy- (I) or 4-acylamino- (II) 2,2,6,6-tetramethylpiperidine-N-**oxide** comprises **oxidation** of the corresponding piperidine with aqueous hydrogen peroxide, either in the

absence of any catalyst at 80-99 deg. C, or in presence of a catalytic amount of an ammonium or alkali metal carbonate or bicarbonate at 60-99 deg. C.

USE - (I) and (II) are used as **spin traps** for labelling biological molecules and as inhibitors for preventing premature polymerisation of vinyl monomers.

ADVANTAGE - The process gives good yields, does not require a heavy metal catalyst (specifically sodium tungstate) as was necessary in prior art processes and which cause environmental pollution in waste waters. It also does not require a large molar excess of carbonate or bicarbonate and can even proceed without catalyst. Sodium carbonate and bicarbonate are inexpensive, easily handled, and have no adverse environmental effects. Dwg.0/0

L21 ANSWER 9 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-051852 [05] WPIDS
DNC C97-017130
TI Use of nitroxide cpds. against free radical-induced **oxidative stress** - due to ionising radiation, carcinogens, mutagens, ageing, arthritis and reperfusion.
DC B03 B05
IN DEGRAFF, W G; HAHN, S; MITCHELL, J B; SAMUNI, A
PA (USSH) US DEPT HEALTH & HUMAN SERVICES
CYC 69
PI WO 9640127 A1 961219 (9705)* EN 51 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CZ DE DK EE ES FI GB GE HU IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
AU 9661028 A 961230 (9716)
ADT WO 9640127 A1 WO 96-US9524 960607; AU 9661028 A AU 96-61028 960607
FDT AU 9661028 A Based on WO 9640127
PRAI US 95-473960 950607
AB WO 9640127 A UPAB: 970129
Use of a compsn. contg. a carrier and a metal-independent nitroxide or an oxazolidine capable of forming an oxazolidine-1-oxyl or its salts, to protect biological materials from **oxidative stress**.

The cpd. is pref. of formula (R4)(R5)N(R3) (I), where R3 = O or OH; NR4R5 = heterocyclyl, or R4, R5 = opt. substd. cyclic or heterocyclic gp. such as piperidine, pyrrole, imidazole, oxazole, thiazole, pyrazole, 3-pyrroline, pyrrolidine, pyridine, pyrimidine, purine or deriv.

USE - The compsns. are useful in treating **stress** due to free radicals formed by an **oxidising** agent, oxygen-induced degeneration or disease, ionising radiation, carcinogens, chemotherapeutic agents, mutagens, aging, arthritis, reperfusion injury or increased oxygen exposure due to or pulmonary adult distress syndrome or in preventing oxygen-induced lenticular degeneration, cataracts or hyaline membrane disease in infants. The compsns. are also useful in prolonging the shelf life of cells, tissues or organs in vitro (all claimed). They can also be used as protectants against cytotoxicity due to excessive **oxidn.** in animal or plant cell culture media and in preventing **oxidn.** of aerobic microorganisms, degradation of labile chemicals, chain elongation during polymer formation, degradation of foods and additives

(esp. when preserved by radiation treatment), the effects of paraquat and wt. gain. Admin. is parenteral, intramuscular, subcutaneous, intravenous, intra-articular, transdermal, oral, buccal or in the form of a suppository, an aerosol or drops. 4-hydroxy-2,2,6,6-**tetramethylpiperidine-1-oxyl** (Ia) is administered orally or intravenously in a daily dosage of 0.1-300 mg/kg or 0.1-200 mg/kg by inhalation. In treatment following exposure to radiation, admin. takes place 30 mins.-24 hrs. after exposure (all claimed).

ADVANTAGE - The nitroxides have low molecular weights, are uncharged and water soluble so easily cross into intracellular areas. Being non-proteins, they are not antigen stimulants, and as they do not contain metals, there are no adverse metal-induced reactions. They are non-toxic and their lipophilicity can be controlled by addn. of organic substits., allowing specific organs or organelles to be targeted.

Dwg.0/11

L21 ANSWER 10 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 96-184680 [19] WPIDS
DNC C96-058462
TI Stable, easily handled **spin-trap** agent - comprising 3,5,5-tri methyl-1-pyrroline-N-**oxide** deriv., used for detecting free radicals in vivo.
DC B03
PA (YAMA-N) ZH YAMAGATAKEN TECHNOPOLIS ZAIDAN
CYC 1
PI JP 08059465 A 960305 (9619)* 7 pp
ADT JP 08059465 A JP 94-191367 940815
PRAI JP 94-191367 940815
AB JP08059465 A UPAB: 960510

Spin trap agent comprises a 3,5,5-trimethyl-1-pyrroline-N-**oxide** deriv. of formula (I). R = H, OH, amino (opt. substd. with lower alkyl) or 2-oxy-1-pyridyl.

Also claimed is a method or trapping a free radical which is unstable in vivo using (I).

USE - (I) is useful to detect or determine free radicals in vivo e.g. superoxide, hydroxy, methyl and hydrogen radicals. The concn. of (I) is 0.1-0.2 M.

In an example, a mixt. of ammonium chloride (2.4 g), water (44 ml) and 2-(1-hydroxymethyl-3-methyl-3-nitrobutyl)-1,3-dioxolan (10 g) at 10deg.C was treated with zinc powder (10 g, 0.153 mol) gradually at < 15deg.C under N2, followed by stirring for 15-30 mins.. After removing unreacted zinc powder and salt, the filtrate was made acidic (pH 2) with HCl, left overnight, heated at 70deg.C for 40 mins., made alkaline (pH 10) with NaHCO3 and concd.. The residue was extracted, dried and subjected to column chromatography to give 5,5-**dimethyl**-1-hydroxymethyl-1-**pyrroline-N-oxide** (3HMDMPO) in 33% yield.

ADVANTAGE - (I) is stable and easily handled.

Dwg.0/4

L21 ANSWER 11 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 95-254786 [33] WPIDS
DNC C95-116385
TI Alpha-(2,4-di sulphonyl-**phenyl**)**tert-butyl nitrone** - is free radical trapping agent, useful in

oxidative damage to CNS, e.g. from stroke or slower function loss, or in cancer therapy.

DC B05
IN CARNEY, J M
PA (OKLA-N) OKLAHOMA MED RES FOUND; (KENT) UNIV KENTUCKY RES FOUND
CYC 58
PI WO 9517876 A2 950706 (9533)* EN 46 pp
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AM AT AU BB BG BR BY CA CH CN CZ DE DK ES FI GB GE HU JP KE KG KP KR KZ LK LT LU LV MD MG MN MW NL NO NZ PL PT RO RU SD SE SI SK TJ TT UA US UZ VN
AU 9515527 A 950717 (9544)
US 5475032 A 951212 (9604) 17 pp
US 5488145 A 960130 (9611) 12 pp
WO 9517876 A3 950810 (9619)
ZA 9504297 A 960327 (9619)# 48 pp
US 5508305 A 960416 (9621)# 16 pp
NO 9602637 A 960813 (9642)
EP 736004 A1 961009 (9645) EN
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
FI 9602589 A 960820 (9646)
CZ 9601775 A3 961211 (9706)
TW 299315 A 970301 (9723)
AU 679835 B 970710 (9736)
BR 9408378 A 970819 (9739)
JP 09507232 W 970722 (9739) 39 pp
SK 9600788 A3 970910 (9744)
KR 97700022 A 970108 (9801)
NZ 279025 A 980226 (9813)
HU 76788 T 971128 (9817)
BR 1100626 A3 980519 (9826)
US 5780510 A 980714 (9835)
ADT WO 9517876 A2 WO 94-US14545 941222; AU 9515527 A AU 95-15527 941222; US 5475032 A Div ex US 93-173579 931223, US 95-426961 950424; US 5488145 A US 93-173579 931223; WO 9517876 A3 WO 94-US14545 941222; ZA 9504297 A ZA 95-4297 950525; US 5508305 A CIP of US 93-173579 931223, Div ex US 95-426961 950424, US 95-468564 950606; NO 9602637 A WO 94-US14545 941222, NO 96-2637 960620; EP 736004 A1 WO 94-US14545 941222, EP 95-907224 941222;
FI 9602589 A WO 94-US14545 941222, FI 96-2589 960620; CZ 9601775 A3 CZ 96-1775 941222; TW 299315 A TW 95-100747 950127; AU 679835 B AU 95-15527 941222; BR 9408378 A BR 94-8378 941222, WO 94-US14545 941222; JP 09507232 W WO 94-US14545 941222, JP 95-518098 941222; SK 9600788 A3 WO 94-US14545 941222, SK 96-788 941222; KR 97700022 A WO 94-US14545 941222, KR 96-703367
960622; NZ 279025 A NZ 94-279025 941222, WO 94-US14545 941222; HU 76788 T WO 94-US14545 941222, HU 96-1739 941222; BR 1100626 A3 BR 97-1100626 970513; US 5780510 A CIP of US 93-173579 931223, WO 94-US14545 941222, US 97-663316 970619
FDT AU 9515527 A Based on WO 9517876; US 5508305 A Div ex US 5475032, CIP of US 5488145; EP 736004 A1 Based on WO 9517876; AU 679835 B Previous Publ. AU 9515527, Based on WO 9517876; BR 9408378 A Based on WO 9517876; JP 09507232 W Based on WO 9517876; KR 97700022 A Based on WO 9517876; NZ 279025 A Based on WO 9517876; HU 76788 T Based on WO 9517876; US 5780510 A CIP of US 5488145, Based on WO 9517876

PRAI US 93-173579 931223; US 95-426961 950424; ZA 95-4297 950525; US 95-468564 950606; US 97-663316 970619
AB WO 9517876 A UPAB: 950824
alpha-(2,4-Disulphonylphenyl)tert-butylnitrone (DSPBN) of formula (I), and its salts, are new:
USE - DSPBN, like the unsubstd. and known analogue **PBN**, is a free-radical trapping agent, partic. for O2-radicals. It is useful for treating 3 gps. of conditions: (a) for acute intense **oxidative damage** as in stroke and associated conditions, concussion, and subarachnoid haemorrhage; (b) for gradual **oxidative stress**, causing CNS function loss, as in Alzheimer's and Parkinson's diseases, amyotrophic lateral sclerosis, multi-infarct dementia, and retinopathy; and (c) for reducing **oxidative damage** and side effects of radiation or chemotherapy of cancers, to improve tolerance of the patient to the therapy.
ADVANTAGE - DSPBN is more potent and less toxic than the unsubstd. **PBN** and also exhibits no lethality at 1000 mg/kg in rats. It can therefore be used at higher doses, increasing chances of recovery from sudden trauma.
Dwg.0/0

L21 ANSWER 12 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 95-178813 [23] WPIDS
DNC C95-082793
TI New phosphorus contg. **spin trap** cpds. - used to trap free radicals in biological systems.
DC B03 B05
IN JANZEN, E G; ZHANG, Y
PA (OKLA-N) OKLAHOMA MED RES FOUND
CYC 2
PI WO 9511908 A1 950504 (9523)* EN 29 pp
AU 9480518 A 950522 (9534)
EP 675892 A1 951011 (9545) EN
JP 08505406 W 960611 (9648) 24 pp
ADT WO 9511908 A1 WO 94-US12109 941020; AU 9480518 A AU 94-80518 941020; EP 675892 A1 EP 94-931432 941020, WO 94-US12109 941020; JP 08505406 W WO 94-US12109 941020, JP 95-512737 941020
FDT AU 9480518 A Based on WO 9511908; EP 675892 A1 Based on WO 9511908; JP 08505406 W Based on WO 9511908
PRAI US 93-141231 931025
AB WO 9511908 A UPAB: 950619
New **spin traps** comprising P contg. **DMPO**(5,5-**dimethyl**-1-**pyrroline**-1-**oxide**) and **PBN** (alpha-phenyl-N-t-butyl(-)nitrone) derivs. are of formula (I) and (II); R3 = (CH2)nH; n = 1-18; R4, R5 = (CH2)nH, aryl, (CH2)nCO2R or (CH2)nP(O)(OR)2; R = H, Me, Et or a gp. IA metal ion; R1 = phenyl, aryl, alkyl, t-butyl or H; R2 = phenyl, aryl, alkyl or t-butyl.
USE - **Spin trap** molecules are used for trapping free radicals in biological systems and can be used for preventing or treating diseases initiated or mediated by free-radical generation in the body, e.g. ischaemia or inflammation.
Dwg.0/0

L21 ANSWER 13 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 95-160509 [21] WPIDS

DNC C95-074489
TI New 5,5-di methyl-2-tri fluoromethyl-1-pyrroline N-**oxide** cpds. - are useful for trapping free radicals of biological systems.
DC B03
IN JANZEN, E G; ZHANG, Y
PA (OKLA-N) OKLAHOMA MED RES FOUND
CYC 19
PI US 5405967 A 950411 (9521)* 30 pp
WO 9511232 A1 950427 (9522)
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: AU
AU 9480508 A 950508 (9533)
EP 675879 A1 951011 (9545) EN
R: CH DE DK ES FR GB IT LI NL SE
ADT US 5405967 A US 93-142589 931022; WO 9511232 A1 WO 94-US12012 941020; AU 9480508 A AU 94-80508 941020; EP 675879 A1 EP 94-931418 941020, WO 94-US12012 941020
FDT AU 9480508 A Based on WO 9511232; EP 675879 A1 Based on WO 9511232
PRAI US 93-142589 931022
AB US 5405967 A UPAB: 950602
5.5-**Dimethyl**-2-trifluoromethyl-1-**pyrroline** N-**oxide** (2-CF3-**DMPO**) and similar. cpds., having the formula (I), are new. X and Y = H; alkyl (CH2)nH where n is 1-18; aryl; (CH2mCOOR where m is 0-18 and R is H, CH3, C2H5 or a GP. IA metal ion, or (CH2)mP(O)(OR)2.
USE - The new cpds. are **spin trap** molecules useful for trapping free radicals of biological systems, and therefore important for diagnostic and therapeutic purposes.
ADVANTAGE - The new 2-CF3-**DMPO** has advantages trapping free radicals since it is stable, possesses an inert, non-toxic and lipophilic CF3 functionality, and the CF3 function is an NMR marker useful for monitoring the **spin trap**. 2-CF3-**DMPO** is expected to have greater mobility in and out of membranes, and has been determined as having a faster rate constant for trapping superoxide radical anions. The other cpds. (I) are also expected to exhibit similar utility.
Dwg.0/20

L21 ANSWER 14 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 95-068758 [10] WPIDS
DNC C95-030293
TI New phosphorylated 1-pyrroline 1-oxide derivs. - useful as cosmetic radical scavengers and diagnostic spin trapping reagents..
DC B03 D21 E13
IN BARBE, FREJAVILLE C M; CULCASI, M; KAROUI, H; LE, MOIGNE F; PIETRI, S; TORDO, P; BARBE, F C M C; BARBE, FREJAVILLE C M C
PA (CNRS) CNRS CENT NAT RECH SCI
CYC 19
PI FR 2707990 A1 950127 (9510)* 28 pp
WO 9503314 A1 950202 (9510)
RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT SE
W: JP US
EP 660841 A1 950705 (9531) FR
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
JP 08501808 W 960227 (9643) 25 pp
US 5750710 A 980512 (9826)
ADT FR 2707990 A1 FR 93-8906 930720; WO 9503314 A1 WO 94-FR909 940720; EP

660841 A1 EP 94-922283 940720, WO 94-FR909 940720; JP 08501808 W WO 94-FR909 940720, JP 95-504978 940720; US 5750710 A WO 94-FR909 940720, US 95-403783 950316
FDT EP 660841 A1 Based on WO 9503314; JP 08501808 W Based on WO 9503314; US 5750710 A Based on WO 9503314
PRAI FR 93-8906 930720
AB FR 2707990 A UPAB: 950314
1-Pyrroline 1-**oxide** derivs.of formula (I) and their salts with bases are new. R1 = phenyl or 1-18C alkyl; R2 = H, 2H, phenyl, 1-18C alkyl, or APO(YR)2; A = a single bond, CH2 or CH2O; Y = O or CH2; R = H, 1-18C alkyl or 6-18C aryl, but not 18C alkyl when Y = CH2; R3-R5 = H, 2H, phenyl or 1-18C alkyl; R6 = H, 2H, phenyl, 1-18C alkyl or PO(YR)2; R7 = H,
2H or Me; provided that either R2 is APO(YR)2 or R6 is PO(YR)2.
USE - (I) are radical scavengers useful for cosmetic and diagnostic purposes (claimed) and in medicine. For diagnostic use, they may be used as spin-trapping reagents for detection of free radicals in biological media by electron spin resonance for evaluating '**oxidative stress**'.
ADVANTAGE - (I) have better stability, are more soluble in biological
media and form more stable radical adducts than known cpds. such as 5,5-**dimethyl-pyrroline** N-**oxide**.
Dwg.0/0

L21 ANSWER 15 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 93-017884 [02] WPIDS
CR 91-148521 [20]; 91-245486 [33]; 97-535087 [49]
DNC C93-008136
TI Pharmaceutical compsns. comprising spin trapping cpds. - used for treating
stroke, Parkinsonism, ventricular haemorrhage and vasospasm, pulmonary disorders, atherosclerosis, bowel disorders, etc..
DC B05
IN CARNEY, J M; FLOYD, R A
PA (OKLA-N) OKLAHOMA MEDICAL RES FOUND; (KENT) UNIV KENTUCKY RES FOUND; (OKLA-N) OKLAHOMA MED RES FOUND
CYC 36
PI WO 9222290 A1 921223 (9302)* EN 53 pp
RW: AT BE CH DE DK ES FR GB GR IT LU MC NL OA SE
W: AU BB BG BR CA CS FI HU JP KR LK MG MN MW NO PL RO RU SD US
AU 9222614 A 930112 (9317)
EP 590072 A1 940406 (9414) EN
R: AT BE CH DE DK ES FR GB GR IT LI LU MC NL SE
AU 672364 B 961003 (9708)
US 5622994 A 970422 (9722) 14 pp
ADT WO 9222290 A1 WO 92-US5194 920618; AU 9222614 A AU 92-22614 920618; EP 590072 A1 EP 92-914539 920618, WO 92-US5194 920618; AU 672364 B AU 92-22614 920618; US 5622994 A CIP of US 89-422651 891017, CIP of US 90-589177 900927, Cont of US 91-716952 910618, Cont of US 93-52870 930426,
US 94-212800 940315
FDT AU 9222614 A Based on WO 9222290; EP 590072 A1 Based on WO 9222290; AU 672364 B Previous Publ. AU 9222614, Based on WO 9222290; US 5622994 A CIP of US 5025032
PRAI US 91-716952 910618; US 89-422651 891017; US 90-589177 900927; US 93-52870 930426; US 94-212800 940315

AB WO 9222290 A UPAB: 971211
A pharmaceutical composition comprises a non-toxic spin trapping cpd. (I) in a pharmaceutically acceptable carrier for administration to a patient.
USE/ADVANTAGE - The pharmaceutical compositions can be used in the treatment of disorders associated with the **oxidation** of proteins or lipids, including diseases or disorders of the peripheral organs and of the central and peripheral nervous systems, such as those arising from ischaemia, infection, inflammation or exposure to radiation or cytotoxic cpds. Disorders of the central nervous system which can be treated or prevented are stroke, ageing, Parkinsons, concussion, aneurysm, ventricular haemorrhage and associated vasospasm, migraine and other vascular headaches, spinal cord trauma and neuroanaesthesia adjunct. Disorders of the peripheral nervous system which can be treated or prevented are diabetic peripheral neuropathy and traumatic nerve **damage**. Disorders of the peripheral organs which can be treated or prevented are atherosclerosis, chronic obstructive pulmonary disease (COPD), pancreatitis, pulmonary fibrosis due to chemitherapeutic agents, angioplasty, trauma, burns, ischaemic bowel disease, wounds, ulcers and bed sores, lupus, ulcerative colitis, organ transplantation, renal hypertension, over exertion of skeletal muscle and epistaxis (pulmonary bleeding). Suitable daily doses of (I) are 0.1-100 (esp. 0.5-50) mg/kg. The composition can be administered intravenously, orally, via the respiratory tract, subcutaneously, intramuscularly, rectally or topically
Dwg.0/0

L21 ANSWER 16 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 92-253400 [31] WPIDS
DNN N92-193355 DNC C92-112707
TI Substance determn. esp. of enzyme, e.g. catalase in living body - by adding sample to active oxygen generating system, capturing active oxygen with **spin trapping** agent and determining amt. of spin adduct formation.
DC B04 D16 J04 S03
PA (NIDS) JEOL CO LTD
CYC 1
PI JP 04169197 A 920617 (9231)* 8 pp
ADT JP 04169197 A JP 90-298390 901102
PRAI JP 90-298390 901102
AB JP04169197 A UPAB: 931006
Method comprises adding a sample contg. a substance inhibiting or accelerating the generation of active oxygen to an active oxygen generating system which generates oxygen or peroxide as a substrate, capturing active oxygen in the generating system by a **spin trapping** agent, and determining the amt. of spin adduct formed by an electron spin resonance appts. to determine the amt. of the substance inhibiting or accelerating the generation of active oxygen.
The active oxygen generating system is a OH radical generating system with H2O2 and metal ion, and a substance acting on the active oxygen regenerating system is catalase. The substance to be determined is e.g. catalase or azide cpd. (Na azide or aminotriazole). The substrate is e.g. oxygen, H2O2 or t-butyl hydroperoxide. **Spin trapping** agent is e.g. 5,5-**dimethyl**-1-**pyrroline**-1-**oxide** (**DMPO**) or 3,5-dibromo-4-nitroso- benzenesulphonic acid sodium salt hydrate (DBNBS).
USE/ADVANTAGE - Used esp. for determining enzyme e.g. catalase in a

living body. The amt. of a substance causing disproportionation of a substrate, e.g. catalase, may be selectively determined without pretreatment of the sample. The determn. may be carried out with a coloured sample or floating or suspended sample.
0/0

L21 ANSWER 17 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 91-245486 [33] WPIDS
CR 91-148521 [20]; 93-017884 [02]; 97-535087 [49]
DNC C91-106630
TI Alpha-**phenyl tert.-butyl nitrone**
and derivs. - useful for treating or preventing gastric ulceration, caused
by non-steroidal antiinflammatory drugs.
DC B05
IN CARNEY, J M; FLOYD, R A
PA (OKLA-N) OKLAHOMA MED RES FOUND; (KENT) UNIV KENTUCKY RES FOUND; (OKLA-N) OKLAHOMA MED RES FO; (OKLA-N) OKLAHOMA MEDICAL RES FOUND; (KENT) UNIV KENTUCKY
CYC 18
PI US 5036097 A 910730 (9133)* 12 pp
WO 9113618 A 910919 (9140)
RW: AT BE CH DE DK ES FR GB GR IT LU NL SE
W: AU CA JP
AU 9174895 A 911010 (9201)
EP 518951 A1 921223 (9252) EN 33 pp
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
JP 05506214 W 930916 (9342) 10 pp
ES 2044829 T1 940116 (9407)
EP 496796 B1 940831 (9433) EN 43 pp
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
AU 653921 B 941020 (9443)
ES 2044829 T3 950116 (9509)
AU 658139 B 950406 (9522)
US 35112 E 951205 (9603) 16 pp
US 35213 E 960416 (9621) 11 pp
JP 09025263 A 970128 (9714) 22 pp
JP 2620413 B2 970611 (9728) 24 pp
CA 2077653 C 980428 (9828)
JP 2816326 B2 981027 (9848) 23 pp
JP 10259128 A 980929 (9849) 23 pp
JP 10259178 A 980929 (9849) 22 pp
AU 9883102 A 981022 (9903)
ADT US 5036097 A US 90-491452 900309; EP 518951 A1 EP 91-905700 910308, WO 91-US1608 910308; JP 05506214 W JP 91-506200 910308, WO 91-US1608 910308; ES 2044829 T1 EP 90-915877 901017; EP 496796 B1 EP 90-915877 901017, WO 90-US5952 901017; AU 653921 B AU 90-66133 901017; ES 2044829 T3 EP 90-915877 901017; AU 658139 B AU 91-74895 910308; US 35112 E US 89-422651 891017, US 93-78000 930618; US 35213 E CIP of US 89-422651 891017, US 90-491452 900309, US 93-97998 930729; JP 09025263 A Div ex JP 90-515036 901017, JP 96-179709 901017; JP 2620413 B2 JP 90-515036 901017, WO 90-US5952 901017; CA 2077653 C CA 91-2077653 910308; JP 2816326 B2 Div ex JP 90-515036 901017, JP 96-179709 901017; JP 10259128 A Div ex JP 96-179709 901017, JP 98-77985 901017; JP 10259178 A Div ex JP 96-179709 901017, JP 98-77984 901017; AU 9883102 A Div ex AU 95-11315 941102, AU 98-83102 980904
FDT EP 518951 A1 Based on WO 9113618; JP 05506214 W Based on WO 9113618; ES

2044829 T1 Based on EP 496796; EP 496796 B1 Based on WO 9105552; AU 653921
B Previous Publ. AU 9066133, Based on WO 9105552; ES 2044829 T3 Based on EP 496796; AU 658139 B Previous Publ. AU 9174895, Based on WO 9113618; US 35112 E Reissue of US 5025032; US 35213 E CIP of US 5025032, Reissue of US
5036097; JP 2620413 B2 Previous Publ. JP 05505792, Based on WO 9105552; JP
2816326 B2 Previous Publ. JP 09025263
PRAI US 90-491452 900309; US 89-422651 891017; US 90-589177 900927;
WO 90-US5952 901017; US 93-78000 930618; US 93-97998 930729
AB US 5036097 A UPAB: 971211
Method for in vivo treatment or prevention of gastric ulceration from ingestion of NSAID's comprises oral admin. of an effective amt. of alpha-phenyl t-butyl nitrone (**PBN**) and derivs. having spin-trapping activity and preventing ATP depletion in vivo in tissue, of formula (I): where X = phenyl opt. substd. by -(OR)n, -CH=N(OY) or cpd. of
formula (i); R = H, Z-CO- or Z; n = 1-5; Y = t-butyl that can be hydroxylated or acetylated on one or more positions; phenyl; or (ii) W = Zc, NHCO-Z-, -COOZ or Z; Z = 1-5C opt. branched alkyl.

Also claimed are compsns. contg. effective amts. of (I) and an NSAID in an oral pharmaceutical carrier.

(I) may be functionalised to release in vivo a cpd. e.g. 2-, 3-, and 4-hydroxyphenyl t-butylnitrone, etc. Carriers are microcapsules, liposomes, immobilising substrates, salts that are poorly absorbed through
the gastrointestinal lining, oils, and buffers. NSAIDS are aspirin, acetaminophen, ibuprofen, piroxicam etc.

USE/ADVANTAGE - (I), esp. **PBN**, prevent or reverse gastric ulceration and have no measurable effects on normal or uninjured cells. Beneficial effects occur only in injured cells and do not require presence
of specific receptors, enzymes and/or cell types. Doses of (I) are 3-300, pref. 10-30 mg/kg, pref. P.O. **PBN** alone may also be useful in treatment or prevention of ulcers, aspects of diarrhoea, gastritis, oesophagitis, ileitis, and possibly pain and fever. @(12pp Dwg.No.0/0)@

L21 ANSWER 18 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 91-148521 [20] WPIDS
CR 91-245486 [33]; 93-017884 [02]; 97-535087 [49]
DNC C91-064194
TI Compsns. contg. spin-trapping agents e.g. alpha-phenyl butyl nitrone - used to treat conditions associated with stroke or other ischaemic **damage** or **oxidative** tissue **damage**.
DC B05
IN CARNEY, J M; FLOYD, R A
PA (OKLA-N) OKLAHOMA MED RES FOUND; (KENT) UNIV KENTUCKY RES FOUND; (OKLA-N) OKLAHOMA MEDICAL RES FOUND; (OKLA-N) OKLAHOMA MED RES FO
CYC 19
PI WO 9105552 A 910502 (9120)* 71 pp
RW: AT BE CH DE DK ES FR GB GR IT
W: AU CA JP KR
US 5025032 A 910618 (9127) 14 pp
AU 9066133 A 910516 (9133)
EP 496796 A1 920805 (9232) EN 71 pp
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE

JP 05505792 W 930826 (9339) 30 pp
ES 2044829 T1 940116 (9407)
EP 496796 B1 940831 (9433) EN 43 pp
R: AT BE CH DE DK ES FR GB GR IT LI LU NL SE
DE 69012138 E 941006 (9439)
AU 653921 B 941020 (9443)
ES 2044829 T3 950116 (9509)
AU 9511315 A 950323 (9519)
US 5405874 A 950411 (9520) 16 pp
US 5578617 A 961126 (9702) 16 pp
JP 09025263 A 970128 (9714) 22 pp
JP 2620413 B2 970611 (9728) 24 pp
US 5681965 A 971028 (9749) 15 pp
AU 692197 B 980604 (9839)
JP 2816326 B2 981027 (9848) 23 pp
JP 10259128 A 980929 (9849) 23 pp
JP 10259178 A 980929 (9849) 22 pp
AU 9883102 A 981022 (9903)

ADT US 5025032 A US 89-422651 891017; EP 496796 A1 EP 90-915877 901017, WO 90-US5952 901017; JP 05505792 W JP 90-515036 901017, WO 90-US5952 901017; ES 2044829 T1 EP 90-915877 901017; EP 496796 B1 EP 90-915877 901017, WO 90-US5952 901017; DE 69012138 E DE 90-612138 901017, EP 90-915877 901017, WO 90-US5952 901017; AU 653921 B AU 90-66133 901017; ES 2044829 T3 EP 90-915877 901017; AU 9511315 A Div ex AU 90-66133 901017, AU 95-11315 950120; US 5405874 A CIP of US 89-422651 891017, Cont of US 90-589177 900927, US 93-27559 930305; US 5578617 A CIP of US 89-422651 891017, Cont of US 90-589177 900927, Div ex US 93-27559 930305, US 94-365548 941228; JP 09025263 A Div ex JP 90-515036 901017, JP 96-179709 901017; JP 2620413 B2 JP 90-515036 901017, WO 90-US5952 901017; US 5681965 A CIP of US 89-422651 891017, Cont of US 90-589177 900927, Div ex US 93-27559 930305, Cont of US 94-365548 941228, US 95-468561 950606; AU 692197 B Div ex AU 90-66133 901017, AU 95-11315 950120; JP 2816326 B2 Div ex JP 90-515036 901017, JP 96-179709 901017; JP 10259128 A Div ex JP 96-179709 901017, JP 98-77985 901017; JP 10259178 A Div ex JP 96-179709 901017, JP 98-77984 901017; AU 9883102 A Div ex AU 95-11315 941102, AU 98-83102 980904

FDT EP 496796 A1 Based on WO 9105552; JP 05505792 W Based on WO 9105552; ES 2044829 T1 Based on EP 496796; EP 496796 B1 Based on WO 9105552; DE 69012138 E Based on EP 496796, Based on WO 9105552; AU 653921 B Previous Publ. AU 9066133, Based on WO 9105552; ES 2044829 T3 Based on EP 496796; US 5405874 A CIP of US 5025032; US 5578617 A CIP of US 5025032, Div ex US 5405874; JP 2620413 B2 Previous Publ. JP 05505792, Based on WO 9105552; US 5681965 A CIP of US 5025032, Div ex US 5405874, Cont of US 5578617; AU 692197 B Previous Publ. AU 9511315; JP 2816326 B2 Previous Publ. JP 09025263

PRAI US 90-589177 900927; US 89-422651 891017; US 89-422657 891017; WO 90-US5952 901017; US 93-27559 930305; US 94-365548 941228; US 95-468561 950606

AB WO 9105552 A UPAB: 981028
The spin trapping agents are selected from alpha-phenyl-t-butyl nitrone (**PBN**); 5,5-**dimethyl pyrroline** N-**oxide** (DMP); alpha-(4-pyridyl-1-**oxide**) -N-t-butylnitrone (**POBN**); and their derivs. Also claimed are compsns. with active ingredients of formula (I). X = phenyl (opt. substd. by n OR gps., -CH=N(O)(Y), or

-Ph-NH-CO-Z; R = H, -CO-Z or -Z; n = 1-5; Y = t-butyl (opt. substd. by one
or more OH or acetyl gps.) or -Ph-OW; W = -CO-CH3, -NH-CO-Z, -CO-CH3, -CO-OZ or Z; Z = 1-5C alkyl; The dose of **PBN** is 10-300 mg/kg, and is pref. 10-300 mg/kg, and is pref. administered i.v. or orally.

USE/ADVANTAGE - (I) is used to treat or prevent symptoms associated with stroke or ischaemic **damage**, ageing or other conditions associated with **oxidative** tissue **damage**. Examples of treatable diseases include stroke, meningitis, progressive neuronal loss due to Parkinson's disease, senile dementia and drug abuse, disorders arising from exposure to high pressure O2, and bleeding into nervous tissue as a result of trauma.

Dwg.0/0

L21 ANSWER 19 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 89-357814 [49] WPIDS
DNN N89-272009 DNC C89-158578
TI Graft polymer prodn. by treating basic polymer with additive - forming oxygen-stable free radical with irradiated polymer, irradiation and grafting.
DC A18 A89 G06 L03 P84 U11 X24
IN KIMURA, T; MOSCHIJA, K; OIZUMI, H; SODA, Y
PA (HITA) HITACHI LTD
CYC 3
PI DE 3917437 A 891130 (8949)* 8 pp
JP 02000978 A 900105 (9007)
US 5017458 A 910521 (9123)
JP 2641497 B2 970813 (9737) 5 pp
ADT DE 3917437 A DE 89-3917437 890529; JP 02000978 A JP 88-128394 880527; US 5017458 A US 89-354116 890522; JP 2641497 B2 JP 88-128394 880527
FDT JP 2641497 B2 Previous Publ. JP 02000978
PRAI JP 88-128394 880527
AB DE 3917437 A UPAB: 930923

Graft copolymer (I) prodn. involves: (a) treating the basic polymer (II), which can form a first radical (III) on exposure to radiation, with an additive (IV), which can combine with (III) to form a second radical (V), which is stable towards O2; (b) irradiating (II) contg. (IV) with radiation; and (c) adding a monomer (VI) under an O2-free atmos., to effect graft polymerisation of irradiated (II) with (VI). (IV) is a **spin trap**, pref. phenyl-N-butyl nitrone (IVA), nitrosobenzene, nitrosopropane, 2-methyl-2-nitrosopropane and/or 5,5-**dimethyl**-1-**pyrroline** 1-**oxide**. Irradiation is carried out in an atmos. contg. O2, esp. air, or in vacuo, pref. with UV, electron, gamma or x-radiation. During graft ' copolymerisation, (II) is heated and pref. also exposed to UV or visible light.

USE/ADVANTAGE - Process is claimed for use as resist in copying a pattern. The efficiency of the graft copolymerisation reaction is not impaired by the presence of O2 in the air.

1/2

L21 ANSWER 20 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 89-310133 [43] WPIDS
DNN N89-236244 DNC C89-137281
TI Screening metal cpds. for super-**oxide** dismutase activity - by adding to mixt. of super-**oxide** anion source and radical scavenger, then recording ESR spectrum.
DC B04 D16 J04 S03

IN DAMERAU, W; WISCHNEWSK, G
PA (DEAK) AKAD WISSENSCHAFTEN DDR
CYC 1
PI DD 268299 A 890524 (8943)* 5 pp
ADT DD 268299 A DD 88-312213 880113
PRAI DD 88-312213 880113
AB DD 268299 A UPAB: 930923
Determination of the superoxide dismutase (SOD) activity of metal complexes (I) comprises (1) dissolving (I) in an aprotic solvent of less than 10 vol.% water content together with a radical scavenger (II; **spin trap** cpd.); (2) separately dissolving a source of superoxide anion in the same, but anhydrous, aprotic solvent, opt. under protective gas and opt. with addn. of a solvent auxiliary; (3) mixing the two solns. and (4) measuring the ESR spectrum within a specified time (less than 5 min.). From the spectrum the SOD activity is evaluated semi-quantitatively by calibration against a material of known activity.

The solvent is DMSO and (II) is 5,5-dimethylpymoline-1-**oxide** (**DMPO**).

USE/ADVANTAGE - The method is used as a rapid screening procedure for potential pharmaceuticals (SOD mimics are useful for treating chronic inflammatory disorders of the joints). It is simpler than known processes and provides reliable comparison of SOD activity without interference from spontaneous dismutation reactions.
1/2

L21 ANSWER 21 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 89-263249 [36] WPIDS
DNN N89-200861 DNC C89-116897
TI Determining thioredoxin reductase activity - by measuring rate of redn. of free nitroxide free radical by electron spin resonance spectroscopy.
DC B04 D16 J04 S03 S05
IN SCHALLREUT, K U; WOOD, J M
PA (MINU) MINNESOTA UNIVERSITY
CYC 1
PI US 4849346 A 890718 (8936)* 7 pp
ADT US 4849346 A US 87-13671 870212
PRAI US 87-13671 870212
AB US 4849346 A UPAB: 930923
Method for measuring the activity of thioredoxin reductase (TR) in mammalian cells comprises (a) contacting the cells with a hydrophobic quat. ammonium salt (I) comprising a stable nitroxide free radical spin label; (b) measuring the rate of redn. of the free nitroxide free radical of the uncomplexed quat. ammonium salt at the cell surface by electron spin resonance (esr) spectroscopy, the rate of redn. providing a measure of TR activity at the surface of the cells. Pref. (I) is a halogen salt of 3-(dimethyl-benzylamino) acetamido-2,2,6,6-**tetramethylpiperidine** -N-**oxyl** (Ia).

USE/ADVANTAGE - The method is partic. effective for measuring the activity of surface TR in the care of skin cells, e.g. epidermal cells such as normal and malignant melanocytes. This activity has been found to correlate to the ability of the cells to eliminate, and thus to resist, **damage** by free radical **oxidants**. Furthermore, the level

of TR activity can be employed as a diagnostic indication of certain pathologic conditions, e.g. melanomas exhibit higher levels of TR activity than to normal skin cells.
0/5

L21 ANSWER 22 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 88-036522 [05] WPIDS
DNN N88-027589 DNC C88-016267
TI Electrophotographic photosensitive material - has improved ozone-oxidation resistance.
DC E13 G08 P84 S06
IN ETOH, Y; KUDOH, K; TAKEI, Y; TAMAKI, K
PA (KONS) KONICA CORP; (KONS) KONICA KK; (KONS) KONISHIROKU PHOTO IND CO LTD;
(TAMA-I) TAMAKI K
CYC 4
PI WO 8800725 A 880128 (8805)* JA 147 pp
JP 63018355 A 880126 (8809)
JP 63071856 A 880401 (8819)
JP 63071857 A 880401 (8819)
JP 63146046 A 880618 (8830)
DE 3790394 T 880804 (8832)
GB 2201254 A 880824 (8834)
GB 2201254 B 891228 (9001)
US 4952470 A 900828 (9037)
JP 05049220 B 930723 (9332) 103 pp
JP 05067230 B 930924 (9341) 99 pp
JP 06056493 B2 940727 (9428) 75 pp
JP 06056494 B2 940727 (9428) 76 pp
DE 3790394 C2 961024 (9647) 108 pp
ADT WO 8800725 A WO 87-JP489 870709; JP 63018355 A JP 86-162867 860710; JP 63071856 A JP 86-217492 860913; JP 63071857 A JP 86-217493 860913; JP 63146046 A JP 86-221541 860919; DE 3790394 T DE 87-3790394 870709; GB 2201254 A GB 87-5160 870709; US 4952470 A US 88-180816 880421; JP 05049220 B JP 86-221541 860919; JP 05067230 B JP 86-162867 860710; JP 06056493 B2 JP 86-217492 860913; JP 06056494 B2 JP 86-217493 860913; DE 3790394 C2 DE 87-3790394 870709, WO 87-JP489 870709
FDT JP 05049220 B Based on JP 63146046; JP 05067230 B Based on JP 63018355; JP 06056493 B2 Based on JP 63071856; JP 06056494 B2 Based on JP 63071857; DE 3790394 C2 Based on WO 8800725
PRAI JP 86-162866 860710; JP 86-162867 860710; JP 86-217492 860913; JP 86-217493 860913; JP 86-221541 860919
AB WO 8800725 A UPAB: 930923
Electrophotographic photosensitive material consists of a conductive support and a photosensitive layer. The photosensitive layer contains as its main constits. an electric charge generating substance and an electric charge transfer substance. At least one cpd. selected from A to D is incorporated in the photosensitive layer. (A) is represented by the general formula (I). (B) is a spirobichroman cpd. represented by general formula (II). (C) is a spirobiindane cpd. represented by general formula (III). (D) contains at least one of the following gps. (a), (b), (c).
In (I), R1, R2 = alkyl, alkenyl, cycloalkyl, aryl. R3-R6 = H,

halogen, alkyl, alkenyl, cycloalkyl, aryl, alkoxy, thioalkyl, etc. In (II)
R1 = alkyl, alkenyl, aryl, alkoxy, alkyl. R2, R3 = H, halogen, alkyl, alkenyl. R = alkyl, alkenyl, R4CO-, R5SO2, R6NHCO. R4-R6 = alkyl, alkenyl, aryl. In (III) R = alkyl, alkenyl, aryl. R1-R2 = H, halogen, alkyl, alkenyl. R4-R6 = alkyl, alkenyl, aryl.
ADVANTAGE - Improves ozone-**oxidn**. resistance. Having good **damage** resistance and excellent sensitivity.
1/4

L21 ANSWER 23 OF 23 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 87-066713 [10] WPIDS
DNC C87-027767
TI Stabilising crosslinked ethylene (co)polymer - by adding synergetic mixt. of phenolic anti-oxidant and light-protective tri azine amino-piperidine cpd. before crosslinking.
DC A17 A60 E13 E14
IN HOFMANN, P
PA (CIBA) CIBA GEIGY AG
CYC 10
PI EP 214099 A 870311 (8710)* EN 21 pp
R: BE DE FR GB IT NL SE
JP 62053356 A 870309 (8715)
AU 8662035 A 870305 (8716)
BR 8604087 A 870414 (8718)
ADT EP 214099 A EP 86-810376 860822; JP 62053356 A JP 86-202635 860828
PRAI CH 85-3684 850828
AB EP 214099 A UPAB: 930922
(1). Crosslinked C2H4 homo- and copolymers are stabilised by adding, before crosslinking, 0.1-1 wt.%, w.r.t. the polymer, of a synergetic mixt.
consisting of: (a) a phenolic anti-**oxidant**, contg. at least 1 gp. having formula (A) where R1 = tert, butyl or cyclohexyl; R2 = H, CH3 or cyclohexyl and R3 = H or CH3, and (b) a light-protective triazine amino-piperidine cpd. contg. at least 1 sym. triazine **tetramethyl -piperidine** gp. having formula (B) R4 = H, oxyl-o, 1-12 C alkyl, 3-7 C alkenyl-methyl, 7-11 C phenyl-alkyl, 2-5 C alkanoyl or 3-5 C alkenoyl. The wt, ratio (a) : (b) is 0.1-4 (0.12-2). (2). Crosslinked C2H4
homo- and co-Polymers, esp. crosslinked polyethylene, contg. 0.1-1 wt.% synergetic mixt. of (a) and (b) and esp. a thermal radical-former, as crosslinking agent, are claimed per se. USE/ADVANTAGE - The prods. are used for cable insulations and pipes and other extruded or rotationally cast articles. The mixt. of (a) and (b) is more active than standard individual stabilisers or standard synergetic stabiliser mixts. Premature crosslinking is suppressed. Rotationally cast hollow bodied have increased
impact tenacity, esp. at low temps., and increased stability against **stress** corrosion. Elongation at break after 1 week at 150 deg.C can be 96% or more of a initial value on using the mixt.
0/0

.WP IS NOT A RECOGNIZED COMMAND

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L26 ANSWER 1 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-310257 [28] WPIDS
DNC C97-099755
TI New azulenyl **nitrone** derivatives and their spin adducts with free radicals - useful as antioxidants in assays, diagnostics, and therapeutics.
DC B04 B05 D13 D21 E14 H06
IN BECKER, D A
PA (UYFL) UNIV FLORIDA
CYC 75
PI WO 9719054 A1 970529 (9728)* EN 70 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG US UZ VN
AU 9677397 A 970611 (9740)
EP 888290 A1 990107 (9906) EN
R: AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE
ADT WO 9719054 A1 WO 96-US18570 961115; AU 9677397 A AU 96-77397 961115; EP 888290 A1 EP 96-940538 961115, WO 96-US18570 961115
FDT AU 9677397 A Based on WO 9719054; EP 888290 A1 Based on WO 9719054
PRAI US 96-24631 960827; US 95-6949 951117
AB WO 9719054 A UPAB: 970709
Azulenyl **nitrone** derivatives of formula (I) and their salts are new: R1 = H, 1-6C alkyl or 6-10C aryl; R2 = 1-6C alkyl or 6-10C aryl; R3, R4 = H or 1-6C alkyl; R' = 1-6C alkyl; W = 1-6C alkyl, 6-10C aryl or an electron withdrawing gp.; m = 0-3; n, p = 0-2; and o = 1-2.

Also claimed are (a) a method of trapping a reactive free radical comprising allowing (I) to combine with a reactive free radical to provide an adduct or its salt; (b) a method for detecting **oxidation** products in a medium comprising combining (I) or its salt with a medium and detecting the presence of an adduct or an end-product; (c) a process for making an azulenyl **nitrone** comprising introducing an acyl group into an azulene and converting the acyl into a **nitrone**; (d) a spin adduct comprising a combination prod. of an azulenyl **nitrone** and a free radical; (e) a dimeric compound of formula (II); R5,R6 = H or 1-6C alkyl; q = 0-4; and (f) compounds of formula (III); X = O, N or S.

USE - (I) are **spin trapping** agents effective for trapping free radical species useful as antioxidants in physiochemical and biological systems. They are useful in assays and in a number of diagnostic, prophylactic and therapeutic applications including the alleviation, modulation and inhibition of the negative effects of carbon-centred or oxygen-centred radical species and other products of **oxidation**. The compounds are useful for treatment of ailments and conditions mediated by the inappropriate action of free radicals, including **oxidative** tissue **damage**, CNS spinal column **damage** and ophthalmic disorders, progressive neuronal disorders, acute CNS **oxidation** in stroke, gradual CNS **oxidation**, migraines, gastric ulceration, ulcers, certain aspects of diarrhoea. gastritis, oesophagitis, ileitis, ATP depletion in tissue, peripheral organ disease such as atherosclerosis, bedsores, wounds and muscle

overextension, shock and memory disorders including short term memory loss. They are a l so useful as analgesics particularly NSAIDs. The compounds are also useful e.g. as antiinflammatories, neuroprotectants, inhibitors of **oxidative** modification of cholesterol and triglycerides of LDL, for reduction in multiple organ dysfunction and cytokine secretion, and for delaying senescence in human diploid fibroblast cells.

The compounds may also be added to fuels, foods including vegetable oils, cosmetics including facial or body sunscreens of characteristic colours which change colour indicating overexposure to **oxidative** conditions. The compounds may also be used in compositions for alleviating the ill effects of skin ageing. They may be used to detect **oxidation** products in various media such as the above products, lubricants or biologicals fluids (such as blood, serum, urine and semen).

In medical uses, daily dosage is 0.01-35, preferably 0.1-15 mg/kg/day.

ADVANTAGE - (I) are readily prepared from available starting materials and the combination adducts may be colorimetrically detected and optionally isolated and characterised to obtain valuable information e.g. of a structural nature, about the original reactive free radical species.

L26 ANSWER 2 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-212520 [19] WPIDS
DNC C97-068545
TI New cyclic **nitrone**(s) - useful in the prevention of **oxidation** tissue **damage** by free radicals.
DC B02
IN BOWEN, S M; CARR, A A; FARR, R A; FEVIG, T L; JANOWICK, D A; THOMAS, C E; LE, FEVIG T
PA (HMRI) HOECHST MARION ROUSSEL INC
CYC 74
PI WO 9710218 A1 970320 (9719)* EN 96 pp
RW: AT BE CH DE DK EA ES FI FR GB GR IE IT KE LS LU MC MW NL OA PT SD SE SZ UG
W: AL AM AT AU AZ BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE HU IL IS JP KE KG KP KR KZ LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK TJ TM TR TT UA UG UZ VN
ZA 9607514 A 970528 (9727) 91 pp
AU 9668486 A 970401 (9730)
NO 9801054 A 980310 (9824)
EP 863878 A1 980916 (9841) EN
R: AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT SE SI
TW 337520 A 980801 (9849)
CN 1196050 A 981014 (9909)
ADT WO 9710218 A1 WO 96-US13312 960815; ZA 9607514 A ZA 96-7514 960905; AU 9668486 A AU 96-68486 960815; NO 9801054 A WO 96-US13312 960815, NO 98-1054 980310; EP 863878 A1 EP 96-928900 960815, WO 96-US13312 960815; TW 337520 A TW 96-110921 960906; CN 1196050 A CN 96-196877 960815
FDT AU 9668486 A Based on WO 9710218; EP 863878 A1 Based on WO 9710218
PRAI US 95-3551 950911
AB WO 9710218 A UPAB: 970512
Cyclic **nitrones** of formula (I), and their salts, are new. R1, R2 = 1-3C alkyl; or R1+R2 = 5-6C alkylene ring or gp. (i); Z = (CHx)n; x, n =

0, 1 or 2; R3 = H, 1-4C alkyl, OH, OAc or O; X = gps. (a)-(g), the area of dark shading represents the side of attachment to the **nitrone** ring; R4-R7 = H, 1-3C alkyl, OH or 1-3C alkoxy; with the proviso that when R1 and R2 together form a 5-6C alkylene ring and n = 1, then R3 cannot be hydrogen.

USE - (I) are useful in inhibiting **oxidative** tissue **damage** and in treatment of stroke, myocardial infarction, neurodegenerative disease, septic shock, tissue **damage** associated with physical trauma involving excessive bleeding and atherosclerosis (all claimed).

Dosage is 0.01 to 500 mg/kg.

Dwg.0/0

L26 ANSWER 3 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 97-061763 [06] WPIDS
DNC C97-020055
TI New phenyl-alpha-phenyl **nitrone** cpds. - useful in straight chain spin-tapping agents which are stable to heat and light.
DC B05
PA (YAMA-N) ZH YAMAGATAKEN TECHNOPOLIS ZAIDAN
CYC 1
PI JP 08311013 A 961126 (9706)* 4 pp
ADT JP 08311013 A JP 95-116855 950516
PRAI JP 95-116855 950516
AB JP08311013 A UPAB: 970205
Phenyl-alpha-phenylnitrones of formula (I) are new: R, R2, R3=H or 1-6C alkyl; R4=H, COOH or sulphonyl.

USE - (I) are used in **spin-trapping** agents (claimed).

ADVANTAGE - The **spin-trapping** agents are stable to heat and light, easily handled, and are highly hydrophilic. They can effectively trap unstable free radicals (pref. in vivo) and obtained spin adducts have long life and simple ERS spectra.

Dwg.0/0

L26 ANSWER 4 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 96-425372 [42] WPIDS
DNN N96-358108 DNC C96-134050
TI Phosphorylated **nitrone** derivatives - useful in medicine and cosmetics as free radical traps.
DC B04 B05 D21 E11 S03
IN CERRI, V; FINET, J P; TORDO, P; TUCCIO, B; ZEGHDAOUI, A; FINET, J
PA (CNRS) CNRS CENT NAT RECH SCI
CYC 20
PI WO 9627601 A1 960912 (9642)* FR 46 pp
RW: AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE
W: JP US
FR 2731428 A1 960913 (9643) 30 pp
EP 813537 A1 971229 (9805) FR
R: CH DE DK FR GB IE IT LI NL SE
US 5849771 A 981215 (9906)
ADT WO 9627601 A1 WO 96-FR353 960306; FR 2731428 A1 FR 95-2598 950306; EP 813537 A1 EP 96-905922 960306, WO 96-FR353 960306; US 5849771 A WO 96-FR353 960306, US 98-913043 980126
FDT EP 813537 A1 Based on WO 9627601; US 5849771 A Based on WO 9627601

PRAI FR 95-2598 950306
AB WO 9627601 A UPAB: 961021
Phosphorylated **nitrone** derivs of formula (I) and their salts with acids and bases are new.
R1, R2 = 1-18C alkyl; or phenyl opt. substd. by 1-18C alkyl, 1-18C alkoxy, or halo; Y = O or CH2; R = H, 1-18C alkyl, 6-18C aryl, and, when Y is O, R may also be an alkali metal; Ar = phenyl, naphthyl, 2-, 3-, or 4-pyridyl, or benzopyridyl of formula (i); one of X1 - X4 = N and the others = C, the endocyclic N of the various pyridyl rings being optionally present as the N-**oxide** or substd by alkyl or aryl of up to 18C, and the aromatic ring being optionally C-substd by one or more halo, 1-18C alkyl, 1-18C alkoxy, CN, OH, 6-18C aryloxy, carboxy, 1-18C alkoxycarbonyl, NO2, CF3, SO3M, amino opt. alkylated by 1 or 2 (1-18C alkyl groups, or tri-(1-18C alkyl)ammonium; such that when Ar contains quaternary ammonium, the negative ion is physiologically acceptable; M = alkali metal or H.
USE - The compounds are traps for free radicals and may be used in cosmetics and medicine, e.g. to combat cellular ageing, cerebral ageing, ischaemia, cardiovascular disorders, and in the diagnosis and evaluation of **oxidative stress**.
Dwg.0/0

L26 ANSWER 5 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 96-167204 [17] WPIDS
DNC C96-052614
TI Prodn. of natural or synthetic **spin trap** agents with high radical quenching activity - by e.g. concentrating boiling water extract of purple radish, wakame seaweed buds and cloves.
DC B04 D13
PA (NIKK-N) NIKKEN FOOD KK
CYC 1
PI JP 08048633 A 960220 (9617)* 4 pp
ADT JP 08048633 A JP 94-185921 940808
PRAI JP 94-185921 940808
AB JP08048633 A UPAB: 960428
Prodn. of natural **spin trap** agent comprises: (a) extraordinary leaves of purple radish, buds of wakame seaweed (Japanese seaweed) or chopped cloves with boiling distilled water and concentrating the extract to dryness; or (b) homogenising leaves of Japanese horse radish, fruits of jujube or chopped roots of mahani in distilled water and after filtration, concentrating the extract to dryness.
Also claimed is a synthetic **spin trap** agent comprising monosaccharide subjected to Maillard reaction with methionine or sodium glutamate in phosphate buffer soln. at pH 7.
Suitable monosaccharides are arabinose, fructose and glucose.
USE/ADVANTAGE - Natural and synthetic **spin trap** agents are useful as radical quencher for medical application. They have **spin trapping** ability comparable to that of phenyl butyl **nitrone** (PBN), which was reported to have shown improvement of memory disturbance when administered to old rats. Similar medicinal activity can be expected on the claimed agents.
In an example, relative **spin trapping** abilities

of various **spin trap** agents including claimed ones were evaluated by strength of electron spin resonance (ESR) of reaction prod. of hydroxy radical which was generated by Fenton reaction, and the agents, using manganese ion as the reference. The activity of a dried extract of purple radish was 0.52 (1.0 for Mn) and the Maillard reaction prod. of methionine and arabinose was mixt. was 0.64. The ability of PBN was 1.58 under the same condition.
Dwg.0/0

L26 ANSWER 6 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 93-168198 [21] WPIDS
CR 93-087055 [11]
DNC C93-074986
TI New cyclic **nitrone** cpds. - useful for preventing **oxidative** tissue **damage** and inhibiting interleukin-1 release.
DC B02
IN BERNOTAS, R C; CARR, A A; KU, G; THOMAS, C E
PA (RICH) MERRELL DOW PHARM INC; (RICH) MERRELL PHARM INC
CYC 2
PI CA 2077708 A 930313 (9321)* 63 pp
US 5292746 A 940308 (9410) 20 pp
US 5397789 A 950314 (9516) 14 pp
US 5498778 A 960312 (9616) 13 pp
US 5525615 A 960611 (9629) 18 pp
US 5527812 A 960618 (9630) 19 pp
US 5532252 A 960702 (9632) 13 pp
US 5677315 A 971014 (9747) 19 pp
ADT CA 2077708 A CA 92-2077708 920908; US 5292746 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, US 92-926109 920805; US 5397789 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, US 93-170543 931220; US 5498778 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, Div ex US 93-170543 931220, US 94-352470 941209; US 5525615 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, Div ex US 93-170543 931220, Div ex US 94-352470 941209, US 95-458314 950602; US 5527812 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, Div ex US 93-170543 931220, Div ex US 94-352470 941209, US 95-458318 950602; US 5532252 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, Div ex US 93-170543 931220, Div ex US 94-352470 941209, US 95-458311 950602; US 5677315 A CIP of US 91-758063 910912, CIP of US 92-828075 920130, Div ex US 92-926109 920805, Div ex US 93-170543 931220, Div ex US 94-352470 941209, US 95-458310 950602
FDT US 5397789 A Div ex US 5292746; US 5498778 A Div ex US 5292746, Div ex US 5397789; US 5525615 A Div ex US 5292746, Div ex US 5397789; US 5527812 A Div ex US 5292746, Div ex US 5397789; US 5532252 A Div ex US 5292746, Div ex US 5397789; US 5677315 A Div ex US 5292746, Div ex US 5397789, Div ex US 5498778
PRAI US 92-926109 920805; US 91-758063 910912; US 92-828075 920130; US 93-170543 931220; US 94-352470 941209; US 95-458314 950602; US 95-458318 950602; US 95-458311 950602; US 95-458310 950602
AB CA 2077708 A UPAB: 990217
Cyclic **nitrones** of formula (I) are new: In (I) A = a direct bond, CH2 or CH2CH2; R1 and R2 = 1-3C alkyl, or R1+R2 = 2-7C alkylene; R3 = H, halogen, 1-4C alkyl, 1-4C alkoxy, CF3, OCF3 or OH.
USE - (I) are (a) **spin trapping** agents useful for

treating disorders associated with **oxidative** tissue **damage** caused by O-based free radicals, esp. stroke, myocardial infarction, neurodengenerative diseases, shock and traumatic haemorrhage, and (b) inhibitors of interleukin-1 release, e.g. useful for treating arthritis, psoriasis, atherosclerosis and diabetes.

In an example, reaction of N-(1,1-dimethyl-2-phenylethyl) - formamide with P2O5 gave 3,4-dihydro-3,3 - dimethylisoquinoline, which was reacted with m-chloroperbenzoic acid to give 3,3-dimethyl-1,2,3,9 - tetrahydro-oxaziridino (3,2-a)isoquinoline (III). A soln. of 0.657 g (III) in 30 ml. MeOH and 6 ml. H2O was treated with 24 ml. H2SO4, stirred at room temp. overnight, and worked up to give 3,4-dihydro-3,3 - dimethylisoquinoline N-**oxide** (Ia), m.pt. 70-72 deg.C. (Ia) had an IC100 of 1.5 mM against **oxidn.** of soya phosphatidylcholine by Fe(2+)/H2O2.

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L26 ANSWER 7 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 93-087055 [11] WPIDS
CR 93-168198 [21]
DNC C93-038358
TI New cyclic **nitrone spin trapping** agents and IL-1 inhibitors - prevent **oxidative** tissue **damage**, used for treating e.g. stroke, myocardial infarction, shock, neurone-generation, diabetes etc..
DC B02
IN BERNOTAS, R C; CARR, A A; KU, G; THOMAS, C E; THOMAS, G E
PA (RICH) MERRELL DOW PHARM INC; (RICH) MERRELL PHARM INC
CYC 26
PI EP 532027 A1 930317 (9311)* EN 35 pp
R: AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE
AU 9222800 A 930318 (9318)
NO 9203538 A 930315 (9319)
FI 9204076 A 930313 (9324)
ZA 9206781 A 930526 (9328) 62 pp
JP 05213870 A 930824 (9338) 20 pp
AU 652662 B 940901 (9436)
NZ 244268 A 940927 (9438)
HU 67022 T 950130 (9510)
TW 257755 A 950921 (9549)
NO 179514 B 960715 (9634)
IL 103111 A 960723 (9636)
FI 101071 B1 980415 (9821)
ADT EP 532027 A1 EP 92-115575 920911; AU 9222800 A AU 92-22800 920908; NO 9203538 A NO 92-3538 920911; FI 9204076 A FI 92-4076 920911; ZA 9206781 A ZA 92-6781 920907; JP 05213870 A JP 92-267790 920911; AU 652662 B AU 92-22800 920908; NZ 244268 A NZ 92-244268 920908; HU 67022 T HU 92-2923 920911; TW 257755 A TW 92-107090 920908; NO 179514 B NO 92-3538 920911; IL 103111 A IL 92-103111 920908; FI 101071 B1 FI 92-4076 920911
FDT AU 652662 B Previous Publ. AU 9222800; NO 179514 B Previous Publ. NO 9203538; FI 101071 B1 Previous Publ. FI 9204076
PRAI US 92-828075 920130; US 91-758063 910912
AB EP 532027 A UPAB: 960503
Cyclic **nitrones** of formula (I), are new. In (I) R1 and R2 are each 1-3C alkyl or R1 and R2 together form a 2-7C alkylene chain. n = 0 to

2; R3 = H, halogen, 1-4C alkyl, 1-4C alkoxy, -CF3, -OCF3 or OH.
USE/ADVANTAGE - (I) are **spin trapping** agents and are useful in inhibiting **oxidative** tissue **damage** from oxygen based free radicals and in the treatment of disease states in which oxygen radicals either **damage** or destroy tissues via **oxidn**. (I) are therefore useful in treatment of stroke, myocardial infarction, neuro-degenerative disease, shock, and tissue **damage** associated with physical trauma involving excessive bleeding. (I) are also useful as interleukin-1 inhibitors.
In an example, to a stirred soln. of 3,3-dimethyl-1,2,3,9-tetrahydrooxazipidine (3,2-a)iso-quinoline (0.657g) in CH3OH (30ml) and H2O (6ml) was added H2SO4 (24ml). After stirring overnight at room temp. the soln. was poured into aq. Na2CO3 and extracted. The organic layers were washed, dried, filtered and conc. The residue was distilled to give 3,4-dihydro-3,3-dimethylisoquinoline N-**oxide** as a colourless oil which crystallised to give a solid (m.pt. 70-72 deg.C). In tests on the survival rates of endotoxin treated rats, 72 hours after exposure to endotoxin, animals given intraperitoneal dose (30mg/kg) of the above cpd. 30 minutes prior to endotoxin admin. showed a survival rate of 83% compared with a survival rate of 25% for control animals.
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L26 ANSWER 8 OF 8 WPIDS COPYRIGHT 1999 DERWENT INFORMATION LTD
AN 88-235044 [33] WPIDS
CR 87-037167 [05]; 89-229281 [32]; 94-316132 [39]; 96-019914 [02]; 96-029759 [03]; 98-129893 [12]; 98-129894 [12]; 98-144833 [13]; 98-178518 [16]; 98-206603 [18]
DNC C88-105134
TI Topical compsn. for stimulating hair growth - contg. hair growth stimulant pref. which form stable free radical, an antiandrogen and carrier.
DC B01 B05 D21 E19
PA (PROC-I) PROCTOR P H
CYC 28
PI WO 8805653 A 880811 (8833)* EN 31 pp
RW: AT BE CH DE FR GB IT NL OA SE
W: AT AU BB BG BR CH DE DK FI GB HU JP KP KR LU MC MG MW NL NO RO SD SE SU
AU 8813624 A 880824 (8847)
ADT WO 8805653 A WO 88-US232 880127
PRAI US 87-8186 870128
AB WO 8805653 A UPAB: 980507
A compsn. for topical application to the skin to stimulate hair growth comprises (a) a hair growth stimulant (I), (b) an antiandrogen (II) and (c) a carrier in which (I) and (II) are homogeneously dispersed.
Pref. (I) is a substance which forms a stable free radical and is selected from 6-amino-4-(substd. amino)-1,2-dihydro-1-hydroxy-2-iminopyridines, porphyrins, 1,2,4-benzothiadiazine-1,1-dioxides, 5,5-diaryl hydantoins and nitroxide, nitroso and **nitrone** spin labels and **spin traps**.
Pref. (II) interferes with the binding of dihydrotestosterone to receptors and is selected from spironolactone, cyproterone and cyproterone acetate. The compsn. may also contain a free radical scavenger such as

sulphoxides, tertiary phosphine oxides and retinoids. Pref. (I) is used in an amt. of 0.5-3 wt.% and (II) in an amt. of 0.01-5 wt.% of the compsn.

USE - The compsn. is used for treating baldness, partic. androgenic alopecia. Pref. the application is once a day with a sufficient amt. of the compsn. to cover the area at which the stimulation of hair growth is desired.

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